

REMARKS

Claims 58-64 and 70-76 are pending in the application. In the instant Amendment, claims 58, 71 and 72 have been amended to clarify the invention. Upon entry of the above-made amendments, claims 58-64 and 70-76 will be pending in the application.

Claim 58 has been amended to more clearly describe the presently claimed invention. In particular, claim 58 has been amended by replacing the phrase “deviation of one or more experimental variables from desired values” with the phrase “deviation of one or more experimental variables from conditions under which it is desired to make said measurements.” Support for the amendment is found in the specification at page 35, lines 23-32. Claims 71 and 72 have been amended similarly.

No new matter has been added by these amendments. Entry of the foregoing amendments and consideration of the following remarks are respectfully requested.

APPLICANTS' INTERVIEW SUMMARY

Applicants thank Examiner Ardin Marschel, Ph.D., for the courtesies extended during the telephone interview on April 27, 2004 (hereinafter “the Interview”) with Applicants’ representatives Adriane M. Antler, Ph.D., and Weining Wang, Ph.D. During the interview, the claim rejection under 35 U.S.C. § 112, second paragraph, and the claim rejection under 35 U.S.C. § 103(a) based on Felder et al., U.S. Patent No. 6,232,066 (“Felder”), or, alternatively, based on Felder in view of Singer et al., U.S. Patent No. 5,866,331 (“Singer”), were discussed. Dr. Antler first explained the presently claimed invention. The Examiner suggested that Applicants amend claims 58, 71 and 72 by replacing the phrase “deviation of one or more experimental variables from desired values” with the phrase “deviation of one or more experimental variables from conditions under which it is desired to make said measurements.” The Examiner indicated that the amendment would overcome the rejections. Dr. Antler agreed to amend the claims according to the Examiner’s suggestion.

THE REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH, SHOULD BE WITHDRAWN

Claims 58-64 and 70-76 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner contends that the phrase “deviation

of one or more experimental variables from desired values” is unclear because it is not clear what “desired values” means. During the interview, the Examiner suggested that the phrase “deviation of one or more experimental variables from desired values” be replaced with the phrase “deviation of one or more experimental variables from conditions under which it is desired to make said measurements.” Applicants have amended the claims accordingly. The rejection of claims 58-64 and 70-76 under 35 U.S.C. § 112, second paragraph, is therefore obviated and should be withdrawn.

THE REJECTIONS UNDER 35 U.S.C. § 103(a)
SHOULD BE WITHDRAWN

Claims 58-61 and 71-73 are rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,232,066 (“Felder”) alone, or, alternatively, over Felder in view of U.S. Patent No. 5,866,331 (“Singer”).

A finding of obviousness under 35 U.S.C. § 103(a) requires a determination that the differences between the claimed subject matter and the prior art are such that the subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made. *Graham v. Deere*, 383, U.S. 1 (1956). The relevant inquiry is whether the prior art suggests the invention and whether the prior art provides one of ordinary skill in the art with a reasonable expectation of success. Both the suggestion and the reasonable expectation of success must be found in the prior art. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991).

Felder teaches compositions, apparatus and methods for concurrently performing multiple biological or chemical assays. In Felder, positive control probes are used as internal standards for normalization purposes. Examples of such positive control probes include probes specific to house-keeping genes which are not expected to be modulated by, e.g., the agents being tested. Felder also teaches the use of negative control probes which are known not to interact with the target. Felder also teaches the use of probes specific to genes that are known to be induced as part of certain biological process, e.g., apoptosis, for determination of side effects of an agent. In Felder, background subtraction is also used. Felder’s background levels are measurements of fluorescence image of the plate (see Felder, col. 33, lines 25-28). Singer teaches a method for determining the total fluorescence intensity of a single fluorochrome. In Singer, background subtraction and dark current subtraction are used.

The presently claimed invention is directed to methods of removing from measured biological response profiles artifacts comprising measurements of a plurality of cellular constituents of a living cell or organism in response to a perturbation to said living cell or organism. The artifact that are removed by the presently claimed method comprise measurements of changes in said cellular constituents *resulting from deviation of one or more experimental variables from conditions under which it is desired to make said measurements* (emphasis added). Applicants have amended the independent claims to clarify that the changes in cellular constituents are results of deviation of experimental variables from conditions under which the measurements are desired to be made. Felder does not teach or suggest artifacts comprise measurements of changes in said cellular constituents *resulting from deviation of one or more experimental variables from conditions under which it is desired to make said measurements*. Nor does Felder teach or suggest a method of removing such artifacts from measured biological response profiles. Thus, Felder does not render the presently claimed invention obvious. Applicants respectfully submit that the rejection of claims 58-61 and 71-73 under 35 U.S.C. § 103(a) based on Felder should be withdrawn.


Singer does not teach or suggest what is missing in Felder, i.e., artifacts comprising measurements of changes in cellular constituents *resulting from deviation of one or more experimental variables from conditions under which it is desired to make said measurements*. Nor does Singer teach or suggest a method of removing such artifacts from measured biological response profiles. Therefore, Felder in view of Singer does not render the presently claimed invention obvious. Applicants respectfully submit that the rejection of claims 58-61 and 71-73 under 35 U.S.C. § 103(a) based on Felder in view of Singer should be withdrawn.

CONCLUSION

Applicants respectfully request entry of the foregoing amendments and remarks into the file of the above-identified application. Applicants believe that all the pending claims are in condition for allowance. Withdrawal of the Examiner's rejections and allowance of the application are respectfully requested.

Respectfully submitted,

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 32,605
Adriane M. Antler (Reg. No.)
JONES DAY
222 East 41st Street
New York, New York 10017-6702
Phone: (212) 326-3939